Remarks:

Reconsideration of the application is requested.

Claims 1-11 are now in the application. Claims 1 and 7 have been amended. Claims 8 and 9 have been added, support for which can be found on page 8, lines 7-12 of the specification. Claims 10 and 11 have also been added, support for which can be found on page 7, lines 23-26. No new matter has been added.

In item 2 on page 2 of the Office action, claims 1-3 and 6 have been rejected as being fully anticipated by Smith Jr. (U.S. Patent No. 3,474,375) under 35 U.S.C. § 102.

The rejection has been noted and the claims have been amended in an effort to even more clearly define the invention of the instant application. The claims are patentable for the reasons set forth below. Support for the changes is found on page 7, lines 23-26 of the specification.

Before discussing the prior art in detail, it is believed that a brief review of the invention as claimed, would be helpful.

Claims 1 and 7 call for, *inter alia*:

a resistance zone formed of a metal alloy.

The Smith reference discloses a resistor element (22), which is a stiff, dielectric substrate formed of a resistive metal film.

The reference does not show a resistance zone formed of a metal alloy, as recited in claim 1 of the instant application.

Since claim 1 is believed to be allowable over Smith, dependent claims 2-3, 6, and 9 are believed to be allowable as well.

Further discussion regarding the inventiveness of claim 1 will be provided below.

Claim 8 calls for, *inter alia*:

electrically conductive power supply leads constructed as busbars, the electrically conductive power supply leads having a width and a thickness corresponding to the dimensions of the connections.

The reference does not show, electrically conductive power supply leads constructed as busbars, the electrically conductive power supply leads having a width and a thickness

corresponding to the dimensions of the connections, as recited in claim 8 of the instant application.

In item 3 on page 2 of the Office action, claims 1-3 and 6-7 have been rejected as being fully anticipated by Ting et al. (U.S. Patent No. 3,824,328) (hereinafter "Ting") under 35 U.S.C. § 102.

The Ting reference discloses an encapsulated PTC heating element. However, a heating element is not a measuring resistor as is the resistor of the instant application. The heating element according to Ting does not require the equalization of thermal voltages in the area of the connecting wires. Furthermore, PTC resistors are commonly formed of ceramics with electrically conductive crystallites and highly insulating potential barriers at the grain boundaries. The PTC resistors have an extremely steep increase of their electrical resistance in certain very narrow temperature intervals. In the Ting reference, the PTC element (3) and the insulators (9, 11) are cast with a potting material (13, 15, or 19). The potting material does not serve the purpose of equalizing the temperature between the insulators, but instead protects the PTC element (3) from water (column 2, lines 20-30).

The reference does not show a resistance zone formed of a metal alloy, as recited in claims 1 and 7 of the instant application.

Since claim 1 is believed to be allowable over Ting, dependent claims 2-3, 6, and 9 are believed to be allowable as well.

Further discussion regarding the inventiveness of claims 1 and 7 will be provided below.

Furthermore, regarding claim 8, the reference does not show, electrically conductive power supply leads constructed as busbars, the electrically conductive power supply leads having a width and a thickness corresponding to the dimensions of the connections, as recited in claim 8 of the instant application.

In item 4 on page 2 of the Office action, claims 1 and 6-7 have been rejected as being fully anticipated by McLaughlin (U.S. Patent No. 490,082) under 35 U.S.C. § 102.

The McLaughlin reference discloses a heating element, which is surrounded by a fireproof material. As noted above, the resistor according to the instant application is a measuring resistor and not a heating element. Furthermore, the McLaughlin reference discloses that the heating element (2) is

formed of a flat strip of metal of high electrical resistance, such as iron, German silver, or platinum.

The reference does not show a resistance zone formed of a metal alloy, as recited in claims 1 and 7 of the instant application.

Since claim 1 is believed to be allowable over McLaughlin, dependent claims 6 and 9 are believed to be allowable as well.

Further discussion regarding the inventiveness of claims 1 and 7 will be provided below.

Furthermore, regarding claim 8, the reference does not show, electrically conductive power supply leads constructed as busbars, the electrically conductive power supply leads having a width and a thickness corresponding to the dimensions of the connections, as recited in claim 8 of the instant application.

In item 5 on page 3 of the Office action, claims 1 and 4-5 have been rejected as being fully anticipated by Mazzochette (U.S. Patent No. 6,016,085) under 35 U.S.C. § 102.

The Mazzochette reference discloses a resistor element (28) connected with a coaxial connecting line. The resistor element (28) has a substrate (30) of an electrically

insulating material, such as a ceramic or plastic. The substrate (30) has substantially flat top and bottom surfaces 32 and (34). A film (36) of a resistance material is on the top surface (32) of the substrate (30).

Also, the Mazzochette reference does not disclose a highly conductive insulator between the connection wires (50 and 54) in the are of the resistor (28) (Fig. 3)

The reference does not show a resistance zone formed of a metal alloy, as recited in claim 1 of the instant application.

Since claim 1 is believed to be allowable over Mazzochette, dependent claims 4-5 and 9 are believed to be allowable as well.

Further discussion regarding the inventiveness of claims 1 will be provided below.

Furthermore, regarding claim 8, the reference does not show, electrically conductive power supply leads constructed as busbars, the electrically conductive power supply leads having a width and a thickness corresponding to the dimensions of the connections, as recited in claim 8 of the instant application.

In item 6 on page 3 of the Office action, claims 1 and 4 have been rejected as being fully anticipated by Nagai (JP 2-275601) under 35 U.S.C. § 102.

The Nagai reference discloses a temperature-controlled resistor (thermistor), which contradicts the object of the instant application. According to the single figure, the connection wires (3) are disposed so that a temperature equalization is not provided by the insulation layer (4), the insulation layer (4) is not mentioned in the summary. Nagai pertains to a semiconductor thin layer resistor. Nagai discloses that a resistance film (23) formed of SiC is used.

The reference does not show a resistance zone formed of a metal alloy, as recited in claim 1 of the instant application.

Since claim 1 is believed to be allowable over Nagai, dependent claims 4 and 9 are believed to be allowable as well.

Further discussion regarding the inventiveness of claims 1 will be provided below.

Furthermore, regarding claim 8, the reference does not show, electrically conductive power supply leads constructed as busbars, the electrically conductive power supply leads having

a width and a thickness corresponding to the dimensions of the connections, as recited in claim 8 of the instant application.

Regarding the inventiveness of claims 1 and 7, it is applicant's position that claims 1 and 7 are inventive over the references for the following reasons. First, none of the references even remotely pertain to the object of the present invention. Furthermore, none of the references pertain to solving a problem similar to the one solved by the present invention. Therefore, claims 1 and 7 are believed to be inventive over the references as well.

Even though the claims are believed to be allowable further discussion of claims 9 and 10 is given. Regarding claims 9 and 10, none of the references disclose that manganin is used for the resistance zone.

It is accordingly believed to be clear that none of the references, whether taken alone or in any combination, either show or suggest the features of claims 1, 7, or 8. Claims 1, 7 and 8 are, therefore, believed to be patentable over the art and since all of the dependent claims are ultimately dependent on claim 1, they are believed to be patentable as well.

In view of the foregoing, reconsideration and allowance of claims 1-9 are solicited.

In the event the Examiner should still find any of the claims to be unpatentable, counsel respectfully requests a telephone call so that, if possible, patentable language can be worked out.

If an extension of time for this paper is required, petition for extension is herewith made.

Please charge any other fees which might be due with respect to Sections 1.16 and 1.17 to the Deposit Account of Lerner & Greenberg P.A., No. 12-1099.

Respectfully ~~submitted~~,

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For Applicant(s)

AKD:cgm

August 19, 2003

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